

The Planters' Chronicle.

RECORDED AS THE OFFICIAL ORGAN OF THE U. P. A. S. I., INCORPORATED.

VOL. VIII. No. 35.]

AUGUST 30, 1913.

[PRICE 4S. 8.]

THE U. P. A. S. I.

(INCORPORATED)

Twentieth Annual Meeting.

The Twentieth Annual Meeting opened at Bangalore on 25th August, 1913, the following being present :—

CHAIRMAN ...	...	...	MR. C. E. ABBOTT.
VICE-CHAIRMAN ...	...	...	{ MR. E. A. HUGHES. MR. E. L. MAHON.
PLANTING MEMBER ...	...	...	THE HON'BLE MR. F. F. BARBER.
SCIENTIFIC OFFICER ...	...	...	MR. R. D. ANSTEAD, B. A.
SCIENTIFIC ASST. FOR MYSORE ...	...	...	MR. G. N. FRATTINI.
SCIENTIFIC ASST. FOR COORG ...	...	...	MR. L. G. JONAS.
SECRETARY ...	...	...	MR. FLECHER NORTON.

Delegates.

Anamalais ...	...	...	{ MR. G. L. DUNCAN. MR. C. R. T. CONGREVE.
Bababudin ...	...	...	{ MR. K. D. LOVELL. MR. S. H. DENNIS.
Central Travancore ...	...	...	{ MR. R. P. ROSSIE. MR. E. S. WHEEL.
Coorg ...	...	...	{ MR. E. L. MAHON. MR. F. MACRAE.
Kanan Devan ...	...	...	MR. E. A. HUGHES.
Mundakayam ...	...	...	{ MR. ASHTON HAMOND. MR. EDWIN VINCENT.
Nilgiris ...	...	...	{ MR. J. S. NICOLLS. MR. A. S. DANDISON.
North Mysore ...	...	...	MR. T. HUNT.
Shivaroyas ...	...	...	MR. GUY TURNER.
South Mysore ...	...	...	{ MR. W. L. CRAWFORD. MR. M. J. WOODBRIDGE. MR. C. LAKE.
South Travancore ...	...	...	MR. J. H. PARKINSON.
West Coast ...	...	...	{ MR. H. WADDINGTON. MR. CAMPBELL HUNT.
Wynaad ...	...	...	MR. W. E. BOWPASS.

Visitors.

Sir Hugh Daly, K. C. S. I.	Mr. B. D. Darkin.
Mr. Chadwick.	Mr. W. E. Forbes.
Mr. Lund.	Mr. Birnie.
Mr. Scoble Nicholson.	Mr. Plowden.
Dr. Coleman	Dr. Sudborough
Mr. Noel Kirwan.	Mrs. Anstead.
Dr. Watson	Miss Sladden.
Mr. Bainbrigge Fletcher, R. N.	Mrs. Lund.
Mr. Warburton.	Mrs. Playford.
Mr. Cox.	Mrs. Mahon.
Mr. Berrie.	Miss Adam.
Mr. Bell.	Mrs. Cantley.
Mr. Playford.	Mrs. C. Lake.
Mr. J. A. Richardson.	Mrs. Abbott.
Mr. Harley.	Mrs. Nicolls.
Mr. Cantley.	Mrs. Richardson.
Mr. Campbell.	Mrs. Plowden.
Mr. Burnett (Parry & Co.)	Mrs. Hamond.
Mr. Fulcher,	Miss Palmer.

Mrs. Dandison.

AGENDA PAPER.

MONDAY, 25th AUGUST.

1. Secretary's Annual Report
2. Chairman's Address
3. Work of the Planting Member
4. Scientific Officer's Report
5. Weights and measures
6. Roads and Communications—
 - (a) Arsikere—Mangalore Railway
 - (b) Theni Bridge
 - (c) Vaithay Valley Railway
 - (d) Athur Ghaut and Feeder Roads
7. European Defence Association
8. London School of Tropical Medicine

TUESDAY, 26th AUGUST.

9. Labour—
 - (a) Report of Sub-Committee
 - (b) Recruiting and Emigration
 - (c) Enticement of advanced labour to emigrate
 - (d) Non service of Warrants
 - (e) Maistry and Registration Scheme

WEDNESDAY, 27th AUGUST.

10. Agricultural Matters—
 - (a) Pests and Diseases and Pest Act
 - (b) Fertilizers
 - (c) Products
11. Rubber—
 - (a) The International Exhibition 1914
 - (b) Ceara Rubber
12. Legislation—
 - (a) Prevention of thefts of Rubber, Pepper and Cardamoms

13. *Coffee*—

- (a) Hybridization
- (b) Markets
- (c) Adulteration

THURSDAY, 28th AUGUST.

14. *Planters' Benevolent Fund*15. *Planters' Chronicle*16. *Duties*—

- (a) Proposed coffee cess and popularization
- (b) Export duty on Bones, &c.
- (c) Import duties on insecticides tea, coffee and rubber machinery

17. *Tea*—

- (a) Markets
- (b) Cess
- (c) Green Tea
- (d) Railway Freight on Tea Seed

18. *Finance*—19. *Scientific Department*

- (a) Retention of services of Scientific Officer.
- (b) Proposed office of Mycologist
- (c) Assistants
- (d) Bulletins
- (e) Scientific Officer's Programme 1913-1914

20. *Rules of the U. P. A. S. I.*21. *Election of Office-Bearers***The Annual Report of the Secretary, 1912-13.**

There has been no addition to the list of District Planters' Associations affiliated to the U. P. A. S. I. but the Malabar Coast Planters' Association has changed its name to West Coast Planters' Association.

The Hon'ble Mr. J. G. Hamilton, having resigned his appointment as Planting Member on the Legislative Council of Fort St. George, an election was held which resulted in the selection of Mr. E. F. Barber to represent the Planting Community.

Mr. John C. Sanderson, the Association's representative on the London Chamber of Commerce, after many years work for the Association, resigned, and the thanks of this Association were conveyed to him. Mr. G. Owen, was asked to take his place, which he has kindly consented to do.

Invitations to the Annual Meeting have been issued to the gentlemen interested in the various planting industries, many of which have been accepted.

A small Exhibition has been started in the office which will, I hope, form the nucleus of a permanent Exhibition of the products grown in Southern India. It is hoped by this means not only to preserve a permanent record of the progress made in your various Districts, but bring them into closer touch with one another. The success of this Exhibition depends on the continuous support given to it by yourselves. I trust, that interest will not be wanting.

I very much regret to have to report that an attack of Green Bug has occurred in Mysore and Coorg during the past year, but the prompt manner in which the attack was met by the Planting Expert and Mr. Frattini, Scientific Assistant (Mysore), and the advice given by them, checked not

only all tendency towards panic but the pest itself. Though checked, it has not been exterminated, and it will depend upon yourselves by being ready with the necessary appliances in the shape of sprayers and insecticides to keep it down and prevent its spreading. Much valuable advice and information as to its treatment will be found in the pages of the *Chronicle*.

The one point of importance during the past year has been the Labour Question, which has exercised the minds of the Labour Committee appointed at the last Annual Meeting to consider the feasibility of a scheme that would be approved of by the various District Associations, but so divergent have been the opinions expressed, that it has been found quite impossible to produce a scheme that would be acceptable to all. It therefore remains for you, gentlemen, to effect a compromise amongst yourselves at this meeting, to solve this question. Delay will only increase your difficulties. Grasp your nettle, here and now; and let compromise amongst yourselves be the basis of your discussion. A Bulletin, which I trust has been of some use to you, has been issued from the office focussing in a condensed form the troubles that other countries are going through over this same question. It is impossible to minimise the importance of this question, which is the most important that will arise at this meeting.

An *International Rubber Exhibition* is to be held in 1914 and your support is solicited, and you will have to decide if South India Rubber is to be represented. I need not dilate on the value of advertising, and those who followed the descriptions of the New York Exhibition will have learned many lessons from it.

* *Arsikere-Mangalore Railway*.—A great deal of information has been collected and forwarded to the Planting Member who urged the importance of this line on Government, and you will be glad to hear, that the prospects of constructing it in the near future are more hopeful than they have been.

Mr. L. G. Jonas, the Scientific Assistant for Coorg, arrived last November and has taken up his work.

The work of the Scientific Department has very largely developed during the past year. Its utility and necessity is duly being more appreciated by the Planting Community, as evidenced by the ever increasing requests for advice and the numerous samples received for investigation.

Only Rs.54-6-0 has been spent on the Nilgiri Experimental Hybridisation Plot this year, leaving a balance of Rs 210-10-0.

The *Planters' Benevolent Fund* has now a total investment in Government Securities of Rs.15,500 held by the Mercantile Bank of India, Ltd. in safe custody and the balance in the Bank is Rs.1,005-10-7. A short report has been issued up to December 31st, 1912, and a book containing a full report and subscriptions in detail from 1909 is ready for issue. Only two applications since the starting of the fund have been received and Rs.500 has been allotted. Your continued support and subscriptions to this very deserving fund is earnestly solicited.

The Kalisyndicate are undertaking manual experiments in Mysore and Coorg. Rs.3,000 has been received and Rs.1,603-11-2 has been spent leaving a balance of Rs.1,396-4-10 at credit.

The Offices have been insured for Rs.7,000 and the lease of the offices has been renewed for 5 years at the same rent as hitherto.

You will be glad to hear that in accordance with your instructions of last year, all correspondence have been filed and a methodical system introduced into the office which greatly facilitates the business of reference, and that the records have been catalogued.

The Government of India has appointed a small committee to go into the question of weights and measures, and their report will be awaited with much interest.

The *Indian Tea Cess* has been renewed for a further period of five years.

The Office published in the course of the year Bulletin No. 2 on the Labour question and Book of Proceedings. The sale of the latter was satisfactory. At the last Annual Meeting a loss of Rs.150 was estimated. The actual was only Rs.26-2-6. If all members would take the book, no such loss need occur.

In regard to the *Planters' Chronicle*, which became the property of the Association from August 1912, the accounts are satisfactory and show a profit of Rs.2,510. The popularity and usefulness of this paper, have been mainly due to the valuable papers of the Planting Expert, who has not spared himself in writing and publishing articles both attractive and interesting to the Planting community. Lately, the paper has become more freely used by correspondents, using the columns of the paper as a medium for asking for, giving, and receiving information. I trust, that it will still be more largely used in the future, and that the interest newly awakened will not lapse.

The accounts for the year have been laid on the table. They show a larger increase both in expenditure and in income than hitherto. A comparison of actuals with estimates shows the following totals:

	Estimate.	Actual.
Income	Rs.15,904 11 7	Rs.19,016 9 0
Expenditure	Rs.13,569 7 0	Rs.14,775 10 0

It must be noted, however, that the income comprises Rs.1,595 subscription for 1911-12 besides a sum of Rs.872-6-4 a fifth dividend from Messrs. Arbuthnot & Co's. insolvent estate. The above two items cannot be reckoned as a part of the ordinary receipts for the year 1912-13. On the expenditure side Rs.918-5-5 shown as a bad debt is the amount lent from the Reserve Fund in 1911-12 for the Laboratory Upkeep. This sum was to have been repaid as subscriptions were received for the Laboratory Upkeep Fund but as the funds of the Association are now amalgamated, the debt has been taken over by the Association and discharged. Also Rs.725 6 0 has been charged as depreciation at 25%, but the Finance Committee have resolved that no depreciation shall be written off for a year, after which it shall be fixed at 10%.

In conclusion I beg to tender my resignation as your Secretary.

The Chairman's Opening Address.

GENTLEMEN,—You have heard the Secretary's Report read. The accounts are in your hands, and I hope that you will consider that they are quite satisfactory, and show that our finances are again upon a sound basis. During the year the Finance Committee have received accounts every month from the Secretary, in a form which enabled us to see how things were going. These appear to have been rendered without putting any undue strain upon the staff.

South Indian Planters' Benevolent Fund.—This continues to make progress, though it is not as well supported as it ought to be.

A full report has been prepared by the Secretary.

There have only been two applications for help during the year, in both of which the Committee has given assistance.

I would like you all to impress upon the Members of the Associations you represent the advisability of subscribing. Mr. Richardson and those who assisted him to start the Fund are working Planters who understand

what is wanted, what might be wanted by anyone, be he a Planter, a Government Official, or any European living in India.

We have all known cases where a man has been told by his Doctor that he ought to go home for a time, or send his wife or child home; and has had to borrow money at heavy interest, or perhaps had to disregard the advice. Or a man may find himself out of a billet at very short notice, and there are other hard cases where a subscriber can look to the Fund for assistance without feeling that he is in any way asking for charity.

Those of you who have read the Report of the Ceylon Benevolent Fund will see what a good work it is doing. That Fund has been in existence for many years and has been liberally supported by Proprietors and Firms interested in planting. We cannot hope to rival it for a long time and pay regular pensions to relatives left badly off.

But there are instances where a temporary allowance or a loan or a grant of a few hundred rupees would smooth over a rough bit of road. And to that extent our Fund can help.

I would just add that in the two cases in which help has been given, the beneficiaries had not been subscribers. But now that the Fund has been in existence for 5 years such cases should be very rarely entertained.

The Chronicle has done well and the financial result is very creditable to the Editor and Manager, who was not only new to the work, but had to clear off advertising contracts which had been paid for several months in advance, and from which we got no benefit. I am glad he has been able to add something to his income as well as ours. There is no reason why the profit should not be greater in future.

Mr. Anstead has been a regular contributor and has continued to make the paper a mine of information on all Scientific subjects connected with planting. His Assistant Mr. Frattini has also to be congratulated on making a very promising beginning.

The increase in outside correspondence which has been so noticeable lately in the paper is a very favourable sign of the interest that is being taken in it.

Railways and Roads.—I will not say much about the Arsikere-Mangalore Railway, the matter has been in the able hands of our Planting Member. I went to Ootacamund in May and with Mr. Barber and Mr. Bell, the Consulting Engineer for Railway Construction with the Mysore Government, had an interview with His Excellency Lord Pentland. The Madras Government and the Local Authorities in South Canara are anxious to have the part of the line in British territory constructed. His Highness the Maharaja of Mysore and his Advisers are willing to build their part. So we think that there is at last a prospect of this much needed railway coming into existence.

Five years ago, when I was Chairman, I remarked that we knew there were Officers high up in Railway affairs who were in favour of this line, and that though they had been temporarily silenced by those above them, when they came to be heads of the Department, their views would prevail. Let us hope that that time has come. The only other remark I need make in this connection concerns the amount of mystery that has surrounded the terms of the contract which the Secretary of State made with the South Indian Railway. The Company was perfectly right to secure the best terms it could get. But the Government of India owns 14/15ths of the shares presumably in the interest of the country, so it is odd it should have sanctioned a contract it appears ashamed to publish, and which has enabled the Company to hold up any Railway construction that did not suit its book for several years past.

The Delegates concerned will no doubt give us information as to what has been done about the Ahtoor Ghaut Road and the Theni Bridge. The latter piece of work has been before this Association certainly ever since I first attended these Meetings 8 years ago, and the delay in its completion is a blot on the administration.

Scientific Department.—Mr. Anstead has had to do a great deal of travelling in addition to his work at Head Quarters, and has also had to deal with a serious outbreak of Green Bug. He will read you his own Report. But in spite of all his occupations he has, as always, been ready to go outside his own work to help me when I have asked him to: and I have to heartily thank him.

All the Districts have expressed their anxiety to retain his services, and I hope we shall do so.

Products.—Our principal products have had their ups and downs, but on the whole we have done fairly well.

The lower price of Rubber which has recently prevailed is according to the best authorities only temporary and can be remedied by more careful standardisation.

It is also proposed to establish a factory for the manufacture of every article required by users from cultivated rubber.

The recent fall in the price of coffee appears attributable more to political causes arising from a dispute between Brazil and the United States than to anything else. Coffee Planters have long ago learned to regard with reasonable suspicion the estimates of Brazil crops circulated at this time of year.

We have had to contend with an outbreak of Green Bug in Mysore and Coorg, which was probably introduced from the low country and favored by the long drought during the first half of the year. This was promptly taken in hand under the supervision of our Scientific Officer and his Assistant, aided by the Mysore Agricultural Department, and we have to thank Dr. Coleman and his Assistants for all they have done to help us. I hope that the Monsoon has removed the last traces of this pest. The attempt to get the British Customs Duty on tea reduced failed, and it is a question if a reduction would do us much good, or if it would allow the market to be flooded by a quantity of cheap China tea. The remarkable feature of the debate in the House of Commons was Mr. Lloyd George's attack on tea drinking, which he declared had been responsible for the increase of tuberculosis throughout the country. The statement may have benefited his supporters who own the "The Cocoa Press" and improved the value of any Brewery Shares in which the Party Funds are invested. But it must have come as a shock to many of his followers who have been brought up in the belief that tea drinking is not only a sure road to health, but a means of Grace.

However the statement has done us no harm for the British Public has responded with alacrity to the discovery of a new vice, the demand for tea has largely increased, and the market is higher than it was before the Chancellor of the Exchequer spoke. We have to thank the Madras papers for regularly publishing telegrams giving us the latest London quotation for tea and rubber.

Labour.—Our labour troubles continue and it is a poor consolation to us to learn from the very interesting Bulletin compiled by our Secretary that the trouble is universal throughout the East.

We had instances given us at our last Meeting of the malpractices of the Ceylon Recruiters who had been inducing coolies on some Shevaroy Estates to desert. It was finally explained that this was nearly another of the cases with which we are so familiar, of a high principled gentleman from Ceylon being led astray by his wicked Indian subordinate. The "Ceylon Times" considered that the Recruiter was a real smart man, and that the Shevaroy Planters were merely advertising their incapacity to take care of themselves by complaining. The Ceylon Commissioner whom we are glad to welcome here, has taken a different view of these matters, and has shown his anxiety to promote fair play. Ceylon is close at hand, and the Colombo papers are always ready for a fight, but if it were not for the competition of the Straits for coolies, Indian and Ceylon Planters would have little cause to quarrel. Tea is still the staple product in Ceylon, and neither there nor in India can Planters afford to go on piling up advances and raising the rates of pay indefinitely. The Straits Planter with the assistance of his Government is able to land his coolies on the Estate free of debt, to pay them better wages than those received by a farm labourer in Europe, and to give them various privileges which the farm labourer does not enjoy. This seems to defy competition, but we are not going to give in without struggle. There are signs that the Straits Planter is not altogether happy, and that the Shareholder is wishing for retrenchment.

Mr. Aylmer Martin placed his great experience at our disposal, to prove to the Indian cooly that he is at least as well off in his own country as he would be if he emigrated. He has followed that line himself, and though he is recruiting in Districts where he is in direct competition with the Straits he is successful in getting all the coolies he wants, at reasonable rates of pay.

The attempts that have been made to induce Government to discourage emigration have so far met with no success, though most Indian landowners would like to see it checked, and though all the great Departments that employ labour, are finding their workmen's bills constantly increasing.

Will Government do anything? I very much doubt it. Government has never interfered with emigration except where there was clear evidence of ill-treatment.

What we can reasonably ask is that coolies shall not be encouraged to emigrate, and discouraged from coming to work for us: that Railways which really belong to Government shall not grant special facilities for coolies going abroad, which are denied to us; that it shall not be in the power of Colombo papers to say that the Madras Government has ordered its Officials to assist Ceylon Recruiters in every possible way.

The way in which Government assists Overseas recruiters while throwing obstacles in the way of recruiters for Indian Districts is one I have alluded to before both here and in Council. I see that the same complaint is being made up North. For in a recent issue of "Capital" speaking of the tendency of the Indian to emigrate to countries where he is not wanted and the shortness of labour in Planting Districts that paper remarks: Let them read the report of Dr. Banks, Protector of Emigrants, Calcutta, for 1912, and they will see how Government officials deliberately encourage coolie emigration to the West Indies, etc., whereas they put every obstacle in the way of coolies going to Assam.

We ought to endeavour to eliminate inter-District competition among ourselves. If it were possible to come to some agreement about rates of pay

it would be a great step. But we must all recognise the difficulties in the way when conditions vary so much as they do with us.

Last year you appointed a Committee to consider the proposal to have all coolies registered, to collect the opinions of the District Associations, to harmonise them if necessary and to circulate a working scheme before this Meeting with the idea of improving the labour situation. The Committee's Report will be read to you. It was found impossible to harmonise the views of the different Associations. They varied from unqualified approval to unqualified repudiation. Thus two cooly registration schemes which have cost their authors a great deal of time, and been fully considered by all concerned have fallen to the ground. But although the principal object for which the Committee was appointed has failed the year has not been wasted. A great deal of information has been collected, and the Committee has prepared a report making certain suggestions which you can discuss. There are also two proposals independently prepared by Mr. Nicolls and Mr. Waddington for the Registration of Maistries. These have I believe the support of the Nilgiri and the West Coast Associations, and others have expressed their approval of the idea. Anything that makes for inter-District working ought to be welcomed, and I hope good will result from the discussion. As I have said before in another connection what we want in these cases is criticism. Even destructive criticism, which may cause annoyance to men who have taken a great deal of trouble in working out these schemes, is better than a polite acquiescence, which leads after months of more hard work to the discovery that the bulk of the Community will have nothing to do with them, and only wants to be left alone.

To many of us the labour question appears nearly all important. In some Districts things may be said to be approaching a crisis. Rates of pay have been raised, and still coolies are short. Maistries on whom we have depended for years have either failed us, or have come in with less than half their gangs. We must, either as an Association or as individuals find a remedy.

There is always a temptation to ask for Government assistance, or even for legislation: I am convinced that this is a matter in which we had better help ourselves and that Government interference would be only in the direction of placing restrictions on any hold we have over our labour now. We may leave Ceylon out of the argument. Planters are a power in that Island, and no Indian nor Straits Planter expects to hear of a Magistrate giving an indebted cooly 3 months rigorous imprisonment for not coming regularly to work, as is done in Ceylon. But a friend of mine who was planting for some years in the Straits has been good enough to write fully in reply to certain questions I asked him. He admits that Government does assist Planters in recruiting, but it exacts very onerous conditions in return. He writes "we have not to pay a cooly when he is not working, but against this we must, if a cooly is ill, send him to Hospital where he is medically treated and fed at the Estate's expense. Every Estate is compelled to have either a Hospital of its own or to join with neighbouring Estates, and have a Central Hospital. A European Doctor must visit the Hospital at least twice a week and run the Hospital. All this is borne by the Estate."

"Under this heading I should like to point out that the health of each and every Estate is of the greatest concern to the Government. Estates are visited, periodically by the P. M. O. the State Surgeon, the District Surgeon, the Controller of labour and his Assistants. One is never free of them. They inspect the cooly lines and inspect your books and make them-

selves generally objectionable. Should the death rate on an Estate exceed 7% for a half year, a tribe of the above Officials comes down on one. The first thing they do is to stop your recruiting new coolies from India. More than probably you are ordered to feed all coolies at Estate expense, to have your own Hospital, and to drain your swamps. As a nett result you are lucky if you escape the "Sack" from your employers."

Again he writes:— "One thing more, remember that the largest employer of Indian labour in the F. M. S. is the Government itself. It is going to recruit all the Indian labour it can for its own use. It can afford to carry out every whim we can suggest about better treatment of Indians, and what is more make Estates do the same". These are not the views of an unsuccessful man, but of one who did very well there.

The great advantages the Straits have over us is that when the cooly has gone there he has to stay. He is landed free of debt, he is at liberty to leave on a month's notice and has only to save a comparatively few dollars to return home. So are other exiles in other countries: but they don't, and the cooly does not. In our Districts things are very different. A cooly has only to take his weeks expense money on a Saturday, and be home in his village before we have missed him, and in that way alone we or our Maistries lose tens of thousands of rupees every year. What we want is an Agency in our Recruiting Districts that will know where to look for such coolies, an Agency which will be responsible that money sent to Maistries is spent on advancing coolies, not on buying cattle and land, and that when coolies are advanced will see they start for the Estate they have contracted to work on.

As I have said, one of our Districts has had a Labour Agency working successfully for years. We ought to discuss the possibility of establishing such an Agency under the U. P. A. S. I. I believe that we ought to move in that direction. It may not be possible to establish a single Agency: but we ought to all act together.

The great majority of us are going on year after year losing money: some of us afraid to advance largely under existing conditions, some advancing recklessly, nearly all of us short of coolies. It is full time that this condition of things was altered.

We have a great deal of business to get through and I will not detain you any longer from it, except to thank all the Councillors for the willing help they have given to the Executive during the year, and to my colleagues the Planting Member and the Vice Chairmen for their counsel and assistance. Mr. Anstead, I have thanked already. Our Secretary was new to the work but he took it in hand with energy, and has justified your selection.

The Planting Member's Address

Mr. Chairman and Gentlemen,

As this is the first meeting since my election, I would express my hearty thanks to you for the honour you have done me. I can only say, as I said last year, that I hope my ability to forward your interests may be equal to my opportunity.

Labour—Since last January, I think, never a week hardly even a day has passed but I have heard something on the question of labour, and I believe that our difficulty in procuring labour increases quicker than our need for it. You will remember that I have had no instructions from you as to what line I should take on this question, in fact the Association has

not formulated any policy. I hope that this will be remedied, and that at this Meeting some suggestion will be made and adopted which will show our determination to tackle this problem seriously. I must say at once, that the more I hear of the matter the more convinced I have become that we must work out our own salvation. It is all very well to talk of the restriction of recruiting, and I think it is good thing to do. We live in the midst of labour and complain that we cannot get labour, that our competitors across the water get the better of us and thereby show our weakness to the world. Surely if we are aware of this weakness we can pull ourselves together, and organize. I am hopeful that we can do so, and I feel certain that, with a good will, some trouble, and expense, we can hold our labour for our own needs against anyone. I think it is doubtful if emigration could be restricted by legislation, but I do not think it is at all doubtful that things will have to become much worse with us and cultivators of this Presidency in general, before the Government of Madras considered legislation of this nature with a light heart.

I do think that Government could and should help us in the matter of labour. They should see, both in the case of controlled and uncontrolled emigration, that our competitors have no advantage that we have not got, and they should be swift to check any abuses in recruiting, whether for emigration or for work in this country. There are abuses, this is generally admitted, and some few cases have been brought to light. I would ask your gentlemen with the help of your Associations to bring to notice any abuses you may know of. Hearsay alone is no good, we want good, hard, well proven facts.

It has been said that, if the present system of recruiting has the abuses that are alleged, it would fall to pieces of itself. I do not think that this is necessarily so. Look at the sums paid for a recruited coolie, consider the class of man that is likely to be attracted by these fees and then consider the class that is recruited. The recruiter has some education and the wage he gets must make him to some extent unscrupulous, while the coolie is, as a rule, illiterate and a child in his hands. It will be understood that I am speaking of professional recruiting and where high prices are paid, even up to Rs.150 a head, I am told, for so much human flesh and blood it would be unnatural if there were no abuses. Another thing that may keep a rotten system going is that it is playing into the hands of kangarnies and maistries. It is not difficult for them to see the advantages of selling the services of themselves and their coolies to the highest bidder, or even, in the case of dishonest men, of selling their services to two parties. Surely some proofs can be forthcoming that this is done, not only by maistries, but by coolies also.

It may interest you gentlemen to know what the drain by emigration is. By the favour of the Chief Secretary I have been given the emigration figures and I find that during the decade ending 1912, 3,477,676 people have emigrated to Ceylon, Burmah and the Straits, and that 2,725,670, emigrants have returned. This gives an average loss to these 3 countries of about 75,000 per annum, but, as you all know, emigration has increased considerably of late, in 1903 the loss was 21,395 in 1908, 85,703, and in 1912, 90,217.

The population of the Madras Presidency is about 42 millions, and the average increase of population is roughly speaking 300,000 a year. You will see then, that the loss has averaged 20% of the increase in the whole population for the past 10 years, what the percentage on the increase of population of those classes which are recruited for work on estates may be, I have not been able to find out; something enormous.

I would make these suggestions for your consideration :—

1. The abolition of the professional recruiter.
2. The establishment of a Labour Commission.
3. The consideration of the question of advances or premium paid to secure a coolie's services.

I do not think that these of themselves, if given effect to would check this drain to the extent that we would wish, but they might tend to check it or at anyrate help us towards making work in this country more attractive to the labourer than work abroad.

Cinchona.—During the year the question of Cinchona planting has come up and it is an open secret, if indeed it is a secret at all, that a proposal has been made that Government should plant Cinchona on the Anaimalais.

It has been our consistent policy to oppose any planting by Government and I can see no reason now why we should change that policy. I think I am right in saying that my predecessors who have taken up the matter at all have all urged Government to encourage planters to plant cinchona. I think that the men who urged this have been justified by events and have proved themselves more farseeing than Government. The position, now that the combine is through, is not yet quite clear, but it seems certain that if Government wishes to buy bark in Amsterdam now, they will have to pay the Dutchman's minimum, a minimum they have always refused to their own planters. It also seems certain that those of us who still have chinchona will have no market to sell in.

Under these circumstances it is satisfactory to know that Government have stocks that will, as far as can be seen, outlast the term of the present combine and it is also satisfactory that I have an assurance that Government will purchase what bark we can supply up to 300,000 lbs. of 4% bark per annum, but I do not know what price will be fixed.

I have been asked, and shall be glad if I can be told at this meeting, what bark can be supplied by planters for the next 5 years.

I do not think it can be denied that an assured supply of quinine at a reasonable price is of importance to the country.

The fact that Government feels bound to purchase bark as cheaply as possible for the benefit of the people has been the bar to their fixing a minimum price for our unit. It is obvious that if they do start planting for themselves, on a larger scale, they will fix a minimum unit and that minimum will be their cost of production. It should be easy for us to prove that we can produce cheaper than they can, and I would suggest a minimum unit and Government control of any further acreage to be planted. They can estimate their requirements 10 and 15 years ahead and it would be absurd to expect them to agree to pay a minimum unit price for more bark than they require.

Scientific Department.—I have been asked to find out the wishes of the various Associations not only regarding the continuation of the Department but also for the retention of present Scientific Officer's services. If we are desirous of keeping the appointment on, I understand the matter has to be referred to the Secretary of State, and the Government of Madras, in order that they may help us, would like us to make our case for a permanent department as strong as possible.

I am of opinion, if we keep the Department on, that we should ask to have it put on a broader basis. It is hard to expect one man to work unaided.

ded over so large an area and to give us all the results we want. Mr. Anstead tells us that a mycologist is really a necessity to deal with our worst diseases, and I would suggest that we ask not only for a mycologist but also that the salary and prospects of the existing office be made such that will not only attract but keep a first class man.

We do not want a billet like this to be looked upon as a stepping stone to other things, and we do want continuity. The value of our exports from the Presidency alone amount to some 240 lakhs, so the Government contribution of Rs.5,500 cannot be deemed adequate, and it hardly affects the total of the amount estimated in the budget for agriculture.

Arsekere-Mangalore Railway.—This is more or less a local matter, but it is one that has been before this Association for many years. The South Mysore Planters' Association brought up the question again early in April, and since then I have sent through the Secretary to the Associations concerned all the information I could gather. The position is satisfactory, but there will still be some further delay before a start is made. It is now more than 12 years since the last report and estimates were made, and now a new estimate and a new traffic estimate are considered necessary. The scheme has the approval of the Madras Government, and I understand that it has been sent to the Railway Board for sanction. I also understand that there will be no difficulty in finding the money as soon as sanction has been given. Our thanks are due to the South Canara District Board for the prompt manner in which they imposed a Railway Cess. It was done within a fortnight from the date on which the suggestion was made to the President, Mr. Couchman.

The Engineer-in-Chief for Railway construction with the Mysore Government has been kind in placing information at our disposal.

European Defence Association.—This is hardly a part of the Planting Member's work, but had it not been for a visit to Madras to attend a Council Meeting, I should not have come into touch with the Association, nor have attended the meeting which inaugurated the Madras Branch. The Association started as long ago as 1884; I am told its inception was in Madras. That and the cause for which it was started that it achieved its immediate object and lapsed into comparative obscurity. That it is being revived and supported throughout India is perhaps a sign of the times. It is the only European political organization in India, at a time when other political organizations are active, for this reason it is worthy of support and if you require other credentials I must refer you to its literature and to the names of those gentlemen who are on its council in Calcutta, and control its work.

Annual Report of the Scientific Officer.

1ST JULY, 1912 TO 30TH JUNE, 1913.

Mr. Chairman and Gentlemen,

I have the honour to present to you my Fourth Annual Report as Planting Expert and Scientific Officer to the U. P. A. S. I. This Report takes the usual form being a summary of the work done by the Scientific Department during the year under review; detailed discussions of pests, diseases, manures, &c., are left to be dealt with under their separate headings on the Agenda Paper of the Annual Meeting. At the special request of the Chairman, however, an Appendix has been added showing in tabular form the annual increase of the work of the Department.

OFFICE AND CORRESPONDENCE.

My Office staff throughout the year has consisted of one writer and one peon, and the upkeep of this staff was met as in former years by a contribution from the Government of Madras.

During the year the Library has been arranged and catalogued. The U. P. A. S. I. have accumulated many valuable records in the form of Government Publications, Agricultural Bulletins, Scientific Periodicals &c., but formerly these were in such a state of confusion that it was difficult to refer to them. Though much remains to be done to make the Library a useful working one, publications can now be found with little trouble and in a reasonably short time. A Card Index of Agricultural Subjects has been begun and it is hoped some day to make this complete, as it is felt that it would be a valuable asset in an office which is becoming more and more a Bureau of general agricultural information, and being widely used by planters as such.

Office work annually increases, as is only natural when it is remembered that the Department has only taken four years to grow from nothing to its present dimensions, which though no doubt modest, takes up a considerable amount of time in organisation and correspondence. We now have an Office which is a Bureau of information; a weekly official organ, the *Planters' Chronicle*; a chemical Laboratory; and two Assistants with head quarters in the districts of Mysore and Coorg respectively, with rapidly growing local Departments, all being controlled from Bangalore. Under these circumstances it is not surprising to find that the correspondence which has passed through my hands during the past year has increased by 20 per cent. 797 letters have been received and 818 written during the twelve months under review and these have all received my personal attention. While I consider this is a valuable, and under the existing conditions, a necessary part of the work of the Scientific Department, it should be noted that it absorbs a great deal of time which might be devoted to scientific work, and renders anything in the nature of research work practically impossible.

PUBLICATIONS.

I have contributed regularly to the pages of the *Planters' Chronicle* which continues to be issued as a weekly publication, and I have written 15 papers for it as well as many notes and miscellaneous items. A special section dealing with the work of the Scientific Department and agricultural matters of general interest has been maintained weekly throughout the year.

At the last Annual Meeting a resolution was passed asking the Department to endeavour to publish Bulletins, but it has been found impossible to do so, partly for want of time, and largely for want of material of sufficient importance to warrant a special publication like a Bulletin. Until the scientific staff is increased, and more experimental work in the field is done, the publication of Bulletins in addition to the *Chronicle* appears to be out of the question.

HERBARIUM AND COLLECTIONS.

Little work has been done on these during the year for want of time, but a few sheets of interest have been added to the Herbarium and a few insects have been collected and sent to the Government Entomologist at Coimbatore.

There is a proposal to establish a museum of products, pests and diseases, &c., of interest to the planters of Southern India, and while I feel sure that this is a step in the right direction and I shall be glad to give all the help in my power, I feel that it is impossible for me to undertake any more

work than is being done at present. Volunteers to do museum work are needed and will be heartily welcomed.

TOURS.

During February and March of this year I made a somewhat lengthy tour in the Pulneys and High Range, both new districts to me and visited for the first time. I have also visited the following places and districts during the year under review for short periods for special reasons:—Madras, Chickmagalur, Coorg (twice), South Mysore, Coimbatore, and Nilgiri Experiment Plot.

These tours have necessitated my being absent from head quarters for 74 days during the year and travelling a distance of 2914 miles by rail and 1143 miles by road. Again during the period under review I have toured less than during the first two years I joined the Department, and so have been able to devote more time to laboratory work, and this is I think as it should be. I have now visited all the districts under the U. P. A. S. I. and am familiar with their varying conditions, and little more can be done than has already been done by visiting estates.

SCIENTIFIC ASSISTANTS.

Mr. G. N. Frattini, the Scientific Assistant for Mysore, has completed his first year's work in the country. His headquarters have been established at Goorghully in South Mysore and he has completed an extended tour of the whole district to make himself familiar with the conditions. His presence has quickly made itself felt as he has been able to begin a number of manual experiments with Coffee under the Kalisynidicate scheme, to carry out experiments to investigate the influence that Bees and other insects may have on the fertilisation of Coffee and its quality in co-operation with the Government Entomologist, and to begin the study of Black Rot and other coffee diseases. That his value is fully realised by the Mysore Planters' Association is shown by the fact that they have decided to provide him with a small laboratory, the apparatus for which has arrived in the country. This fact is, I think, quite sufficient to show that an excellent year's work has been done.

Mr. Jonas, the Scientific Assistant for Coorg, arrived in Bangalore on 30th October and after spending a few days at headquarters he went to Coorg and began work. His headquarters have been established at Rock Hill, near Sidapur. It is as yet too early in his career to enable me to give any definite report upon his work and value to the Planters.

I understand that Mundakayam is considering the appointment of a Scientific Assistant to study Rubber, and I trust that the appointment will be made at an early date and the Assistant added to the staff of the Scientific Department of the U. P. A. S. I.

EXPERIMENTAL WORK.

In 1910-11 an attempt was made to arrange for the carrying out of experiments in each District. Local Committees were appointed and consulted and a number of experiments were decided upon, and a list of these was given in my Annual Report for 1911. Since then, however, practically nothing has been heard of the majority of them, and I believe that few were even started. It appears therefore, that it is not possible to get the planters themselves to carry out experiments, and only when Assistants are appointed will any such work be done.

A few experiments have been carried out during the year, chiefly in Mysore and Coorg, where the Scientific Assistants have been able to supervise them. The most important have been the following:—

(1) *Manual Experiments with Coffee.*

The offer of the Kalisynidicate of the U. P. A. S. I. was accepted at the last Annual Meeting and in Mysore experiments have been begun. In Coorg

plots have been chosen and marked out and manures will be applied after the South West monsoon is over.

Experiments have also been carried out on one estate over a period of three years with a manurial system based on a chemical analysis of the soil and the past history of the estate. The results have been published in the *Chronicle* and the yield of coffee has been doubled during the short period of experiment.

(2) *The Conservation in pits of composts of pulp and lime sweepings, &c.*

In accordance with a resolution passed at the last Annual Meeting this work has been continued on these estates in Mysore and Coorg. The analyses of one compost have already been published in the *Chronicle* and the other two will be ready at the end of the year.

(3) *The effect of fertilisers on the latex yield of Ceara Rubber.*

Experiments, first on a small scale and then repeated on a somewhat larger area, indicate that the application of $\frac{1}{2}$ lb. of Nitrate of Soda per tree to Ceara before tapping materially increases the latex yield, while Saltpetre appears to have a still better effect. This work will be continued and other soluble fertilisers experimented with.

(4) *Bees and the Fertilisation of Coffee.*

In co-operation with the Government Entomologist a series of experiments were conducted during the blossom season of this year in Coorg, Mysore, and the Shevaroyes, designed to study this important subject. No results will be available until the crop on the trees experimented with is ripe. In connection with this work the Government Entomologist visited the Districts named above.

(5) *Hybridisation of Coffee.*

This work is being continued in Coorg and Mysore on special estates. The Nilgiri Experiment Plot has been planted up with a number of different varieties of coffee and a few hybrids of known history and the plants are growing well. Nothing more can be done until they flower and are old enough to produce seed.

PESTS AND DISEASES.

During the year under review a new pest on Tea appeared in the Nilgiri—Wynaad in the shape of a caterpillar called *Heterusia virescens*. This did a considerable amount of damage locally but was got under control by means of handpicking the caterpillars and cocoons.

The most important event of the year under this heading has been the unfortunate appearance of Green Bug (*Lecanium viride*) on the Coffee in Coorg and South Mysore. It was first noticed, during the dry weather of this year and it was promptly dealt with by drastic pruning and spraying and every effort was made to prevent it becoming established. In this work the presence of Scientific Assistants was invaluable, and it is most fortunate that this pest was kind enough to await their appointment before putting in an appearance. The monsoon and a parasitic fungus have helped to check the scale, but that these alone will not eradicate it has been amply proved in Coorg where the Bug appeared in new places during the monsoon and was found on one estate which had had 80 inches of rain in two months. The matter is therefore most important and serious.

It would appear that the pest must have been introduced from the low country though the exact means by which the introduction was made has not yet been proved. It is under investigation. The outbreak of this pest in two new Districts simultaneously has raised the important question of

necessity for, and the practicability of, a local Pest Act. Pamphlets in Canarese describing the pest and the remedies, and asking that it may be reported when noticed, have been widely distributed among the ryots and Indian Coffee planters.

I should like in connection with the outbreak to record my thanks to Dr. Coleman, the Director of Agriculture for the Mysore Government, for his advice and help and his promise of aid from his Department to check the spread of the pest in Mysore.

The fact that a Fumigatorium has been established at the Lal Bagh Gardens, Bangalore, in which plants are treated before being sent to the Districts is worthy of record, especially in view of the Green Bug, and our thanks are due to Mr. Krumbiegel, the Economic Botanist for the Mysore Government, for so promptly meeting our wishes on this point expressed at the last Annual Meeting and establishing this system of fumigation.

LABORATORY.

A considerable amount of work has been done in the chemical laboratory during the year, and 40 analyses have been made in addition to special investigations.

Among the investigations completed, or still in progress, the following are the most important :—

(1.) In continuation of the work begun two years ago on the study of the manurial requirements of Coffee, analyses have been made of the developing berry each month throughout a complete cycle of growth. This work will form the subject of a paper to be presented during the Meeting.

(2.) Some Coorg soils were examined for their suitability for the cultivation of Tea.

(3.) A number of samples of Fish manure have been analysed, and it is very noticeable that much of this fertiliser contains high percentages of sand, rendering its value doubtful and adding largely to its cost of transport. One sample examined during the year was found to contain as much as 31.65 per cent. of sand.

(4.) A number of fertiliser guarantees have been checked by the Scientific Assistant for Mysore.

(5.) Samples of adulterated coffee have been examined.

(6.) Many analyses of miscellaneous products, such as Tea Fluff, Composts, Green Dressing Plants, poonacs, &c., have been made.

It is hoped that in the future time will be allowed to continue this laboratory work and to undertake fresh investigations which may suggest themselves.

CONCLUSION.

The period of five years for which my services were originally lent to the U. P. A. S. I. will be completed before the Annual Meeting of 1914 so that this seems a suitable occasion to examine the needs of the Scientific Department as it nears the end of its first period.

When I arrived in April 1909 the U. P. A. S. I. had not even an Office of its own. We now have a fine combined office, a catalogued reference library, a scientific publication published weekly instead of monthly, and yielding a fairly handsome profit to the Association, and a chemical laboratory. We have a staff of three, myself at head quarters with a large amount of office and organisation work to do, and two Assistants with head quarters in two Districts, one with a small laboratory in course of construction. All of us are primarily chemists. So much for the establishment. The District it has to work over stretches from North Mysore in the North

to Trivandrum in the South, and from Bangalore in the East to the sea board on the West, comprises a matter of over 120,000 acres on which three main crops are grown as well as many minor products. If the Scientific Department has justified its short existence, as I trust it has, now is the time to decide whether it is to be increased in size and efficiency so as to be able to deal with this huge tract of country and these varied agricultural interests, and if it is to take its place by the side of Agricultural Departments in other Colonies.

As most of the important problems with which Planters in Southern India are faced can only be studied and solved by means of carefully designed, and still more carefully carried out, experiments in the field, the future policy of the U. P. A. S. I. should be to strengthen the staff of their Scientific Department. This particularly applies to Rubber and Tea Districts where both chemical and mycological work are badly needed, and where practically nothing is being done to increase our knowledge of cultivation and manufacture on scientific lines. As compared with other Tea and Rubber growing countries, like Ceylon, Malaya, and Java, South India is a long way behind. In the countries mentioned well equipped and well staffed Scientific Departments exist which are rapidly making themselves noted and pushing the agricultural products of their respective countries to the front.

I venture to advise the U. P. A. S. I. to expand their Scientific Department therefore, first by appointing more Assistants, especially to carry out Tea and Rubber investigations on the estates themselves, and secondly to consider the advisability of appointing a Mycologist for the whole of the Districts. The latter is in my opinion badly needed. The majority of the worst diseases of crops from which we suffer are fungoid, I need only mention Black Rot, Stump Rot, Root diseases, Pink Disease, Die Back, while even some of the insect pests like Green Bug might possibly be controlled by means of parasitic fungi in the hands of a skilled Mycologist.

In my humble opinion these are the immediate needs of your Scientific Department, a Department which I am very proud to have had the honour of helping to establish.

RUDOLPH D. ANSTEAD,

Planting Expert.

Appendix.

Showing the Annual increase of Correspondence, Tours, &c., of the U. P. A. S. I.

	1909-10.	1910-11.	1911-12.	1912-13.
1. <i>Correspondence</i> —				
Letters received ...	217	536	710	797
Letters written ...	210	534	642	818
2. <i>Planters' Chronicle</i> —				
Special articles ...	32	36	35	15
Notes and other articles ...	62	62	50	70
3. <i>Tours</i> —				
Days absent from headquarters ...	100	176	76	74
Mileage by Rail ...	4,800	4,438	6,080	2,914
Mileage by Road ...	1,800	2,004	757	1,143
4. <i>Laboratory</i> —				
Analyses made ...	—	20	37	40

R. D. A.